ELECTRONICS

6AV11
COMPACTRON TRIPLE TRIODE

DESCRIPTION AND RATING

The 6AV11 is a compactron containing three medium-mu triodes suitable for general-purpose amplifier, phase inverter, or oscillator applications.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC†	6.3 ± 0.6			Volts
Heater Current‡	0.6			Amperes

Direct Interelectrode Capacitances§

	Section 1	Section 2	Section 3	
Grid to Plate (g to p)	1.2	1.2	1.2	pf
Input: g to (h + k + i.s.)	1.9	1.9	1.9	pf
Output: p to (h + k + i.s.)	1.8	0.7	2.0	pf

MECHANICAL

Mounting Position—Any

Envelope—T-9, Glass

Base—E12-70, Button 12-Pin

Outline Drawing—EIA 9-56

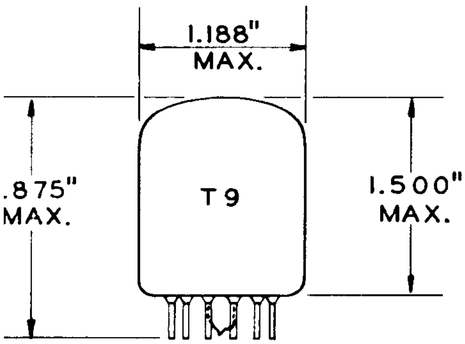
Maximum Diameter	1.188	Inches
Maximum Over-all Length	1.875	Inches
Maximum Seated Height	1.500	Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES, EACH SECTION

Plate Voltage	330	Volts
Plate Dissipation	2.75	Watts
Total Plate Dissipation, All Plates	6.0	Watts
DC Cathode Current	20	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Grid Circuit Resistance		
With Fixed Bias	0.25	Megohms
With Cathode Bias	1.0	Megohms

PHYSICAL DIMENSIONS

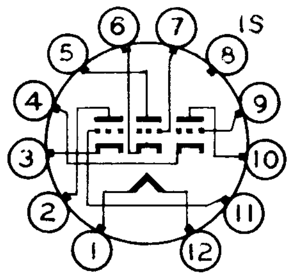


EIA 9-56

TERMINAL CONNECTIONS

Pin 1—Heater
Pin 2—Plate (Section 3)
Pin 3—Cathode (Section 3)
Pin 4—Cathode (Section 1)
Pin 5—Plate (Section 2)
Pin 6—Cathode (Section 2)
Pin 7—Grid (Section 2)
Pin 8—Internal Shield
Pin 9—Grid (Section 1)
Pin 10—Plate (Section 1)
Pin 11—Grid (Section 3)
Pin 12—Heater

BASING DIAGRAM



EIA-12BY

MAXIMUM RATINGS (Cont'd)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

Average Characteristics, Each Section

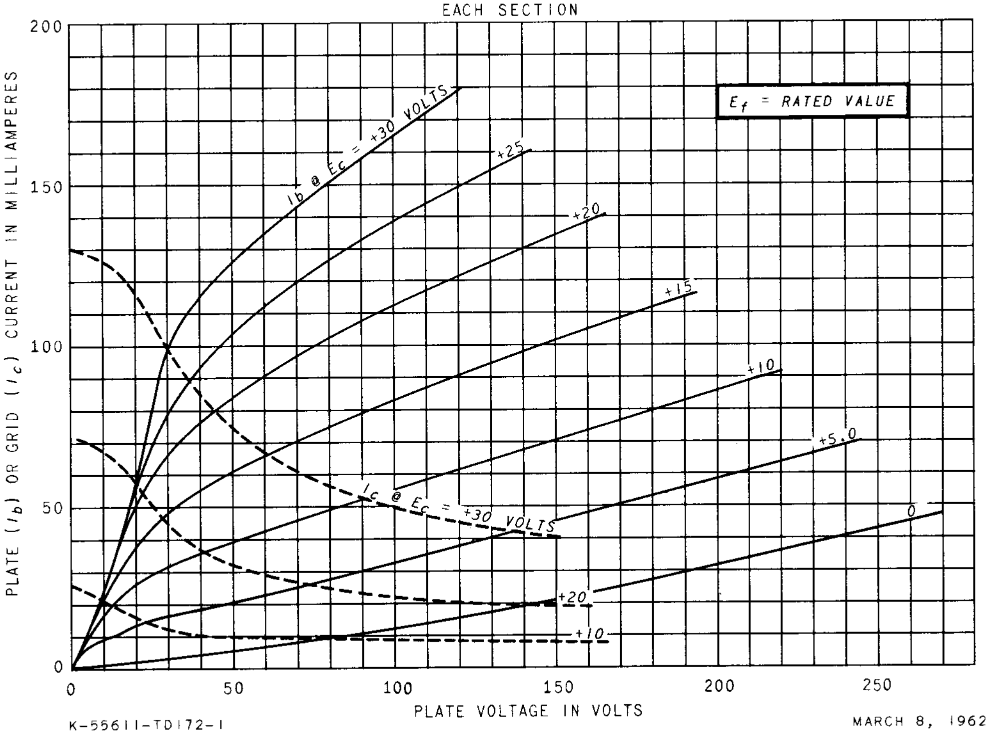
Plate Voltage	100	250	Volts
Grid Voltage	0	−8.5	Volts
Amplification Factor	20	17	
Plate Resistance, approximate	6500	7700	Ohms
Transconductance	3100	2200	Micromhos
Plate Current	11.8	10.5	Milliamperes
Grid Voltage, approximate			
Ib = 10 Microamperes		−24	Volts

† The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

‡ Heater current of a bogey tube at Ef = 6.3 volts.

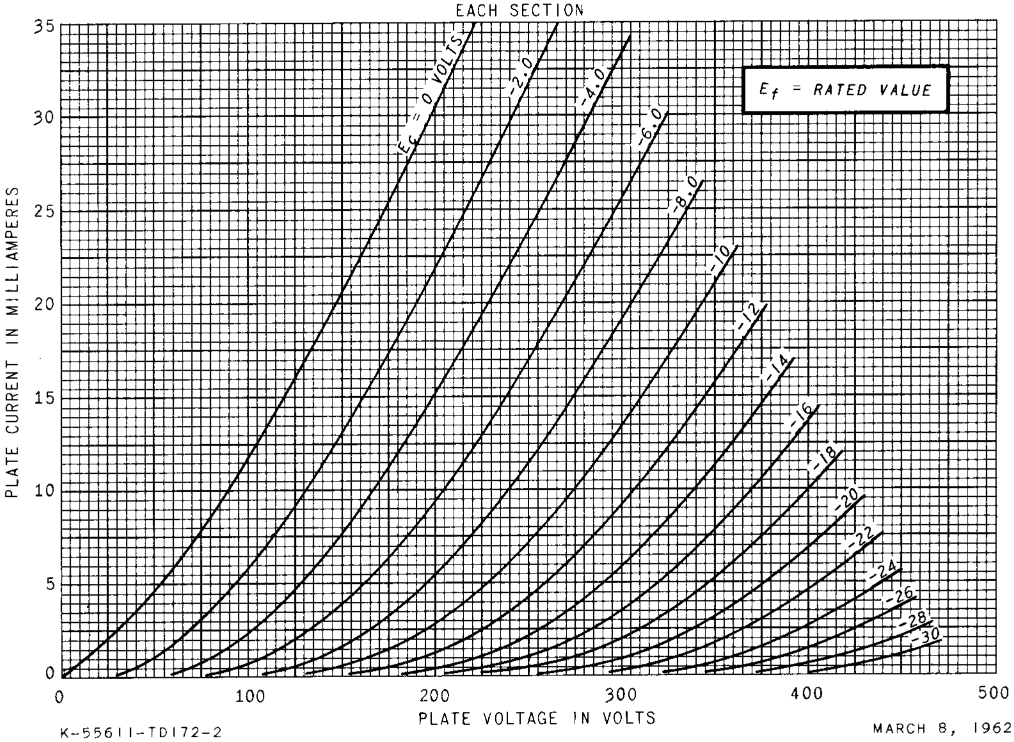
§ Without external shield.

AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS

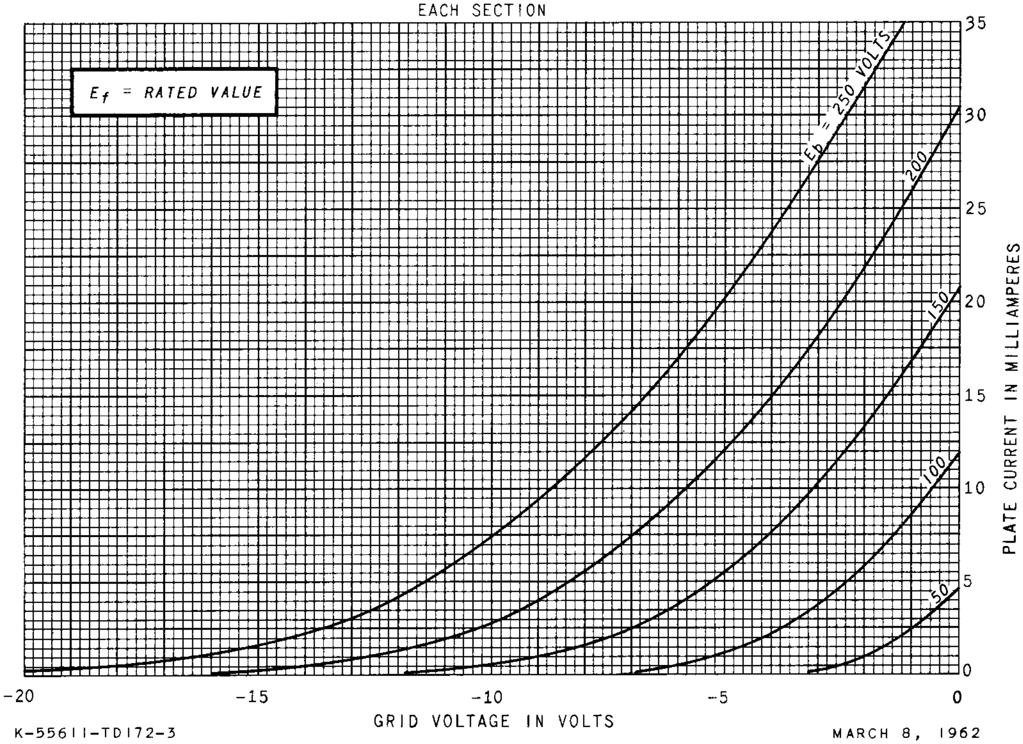
EACH SECTION



K-55611-TD172-2 MARCH 8, 1962

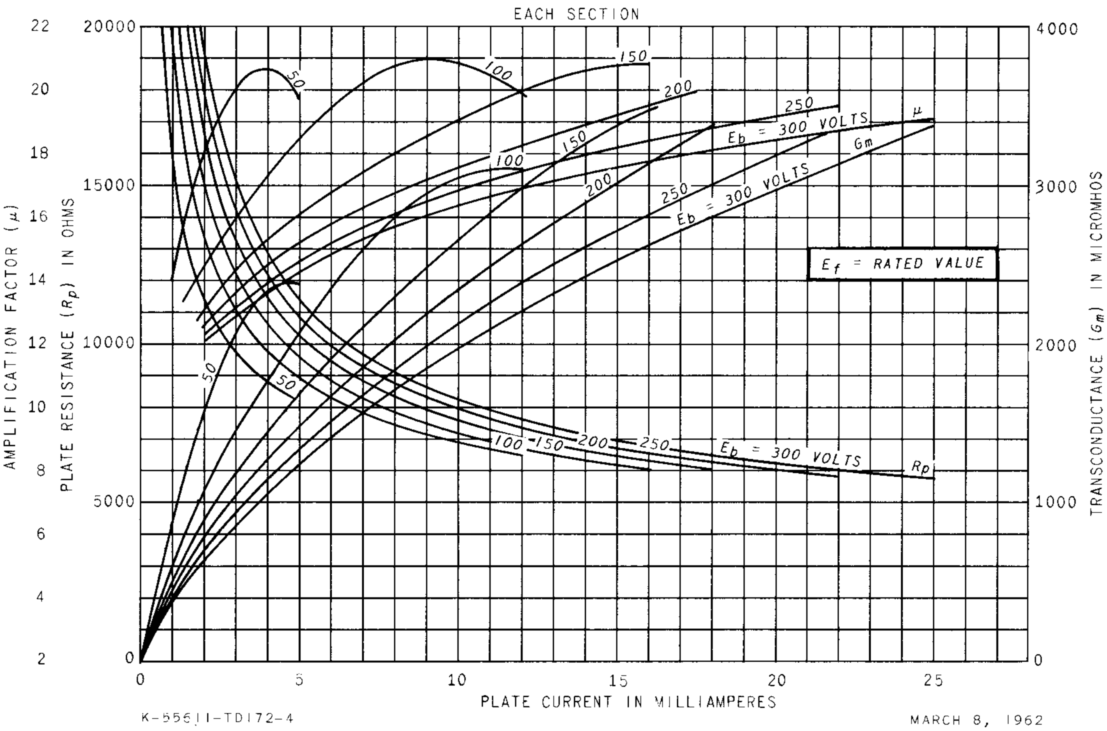
AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



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AVERAGE CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky